

Waipaoa FCS Upgrade Consent Application

Comments on Supplementary Evidence from the Applicant and Submitters

1. Supplementary evidence from the Applicant

The Applicant sets out its position very clearly in its supplementary evidence statements. In general I am in agreement with the Applicant's position. The updated application and proposed works upgrade based on the new modelling results is now fit for purpose subject to an agreed set of conditions for construction purposes and appropriate mitigation of effects.

Apart from finalising the draft set of conditions, there are four areas that require further specific attention in terms of conditions. These are:

- i. The preparation of an updated risk matrix table
- ii. Mitigation agreement conditions for the three houses potentially affected by the upgraded stop bank system
- iii. Clarification around the consent providing for on-going future maintenance and repair works
- iv. Clarification of the position of the Applicant in regard to potential impact on third party infrastructure. (Bridges and power reticulation structures)

2. Supplementary Evidence from Mr Peacock

I am in general agreement with the evidence presented by Mr Peacock in his supplementary evidence report and his responses to the updated application in regard to his original submissions. There are three points I would make comment on. These are:

- i. The equal level of protection philosophy and the super design flood:

The equal protection philosophy is a legitimate design philosophy for a flood control scheme. However recent events in NZ and around the world are changing the thinking in design approach for flood control to more along the lines of a flood management approach with planning controls. The flood management approach is likely to have designated spillways combined with strict planning controls. History has shown that the time frame to enable designated spillways to be constructed with appropriate consenting has proven to be very difficult. The Edgumbe case is an example.

In this current case planning controls using the various existing flood plain zoning in place on the left and right banks already largely mitigate risks in terms of potential damages to built-up areas. Therefore an equal protection philosophy can be applied as proposed by the Applicant. The Applicant has already indicated that further flood plain zoning may be applied after further modelling of potential breach scenarios. Thus as stated in the caucusing statement both Craig Goodier and myself consider that specific spillways and designated floodways are factors outside the current application.

ii. Sequence of construction Works

In Clause 4.11 of the caucusing statement it is noted that all three parties agreed that berm reinforcement should be considered as a high priority item in the programme of works. The Applicant will need to consider this and adjust the works programme as may be appropriate. In terms of other works sequencing it is a prerogative of the applicant in accordance with the agreed risk matrix for upgrade programme.

iii. Stop bank strength and stability

The Applicant has undertaken extensive geotechnical studies in regard to stopbank strength and has determined that the material, batters and general stopbank design are fit for purpose. The top width of the stop bank, in this case, appears to be not a strength design factor but provides more an access and future proofing role. I support this design concept for such an important flood control scheme upgrade programme.

Brian Kouvelis
Sustainable Futures NZ Ltd
17th September 2018